

REMARKS

Claims 1-8 remain in the application with claims 1 and 8 remaining in independent form. Applicant has amended claims 1, 2, and 5-8. There is full support in the specification as originally filed for the amendments to claims 1, 2, and 5-8. Accordingly, no new matter has been introduced.

Claims 5-7 stand objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from another multiple dependent claim. The dependency of claims 5-7 has been amended such that this objection is overcome.

Claims 1-4 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 has been amended to clarify that "reaction" refers to the addition of the alkylene oxides onto the H-functional initiator substances. Accordingly, this rejection is believed to be overcome.

Claims 1-4 and 8 stand rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Applicant respectfully traverses this rejection as this terminology stands on its own and is easily understood by those skilled in the chemical arts. More specifically, it is widely recognized that the terminology "electrically neutral", when applied to a chemical compound, means "without electrical charge" or "not electrically charged". That is, the charges of the cationic and anionic portions of the metal salt compound are balanced such that the metal salt compound is neither cationic or anionic.

Claims 1-4 and 8 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Firstly, the language "selected from among" has been redacted from independent claims 1 and 8 as necessary. Secondly, independent claims 1 and 8 have been amended to describe the X species of the metal salt as it was first described in the application as originally submitted. In doing so, $(S_{n+1}H_{sn-2}O_4)^{2-}$, as well as another component of the Markush grouping for X, have been deleted to re-set the Markush groupings in independent claims 1 and 8 back to their original form. Accordingly, a

definition for "s" is no longer needed, and the Applicant respectfully submits that this rejection is overcome. Simply stated, the species $(S_{n+1}H_{sn-2}O_4)^{2-}$ was inadvertently, and erroneously, introduced into claims 1 and 8.

Claims 2-4 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Firstly, NH_4^+ has been deleted from the Markush group set forth in claim 2. Secondly, X in independent claim 1 has been amended to include the species SO_4^{2-} and $(C_{n+1}H_{2n-2}O_4)^{2-}$. As briefly alluded to above, in the first amendment to independent claim 1, certain typographical errors were inadvertently introduced that resulted in the absence of both the SO_4^{2-} and the $(C_{n+1}H_{2n-2}O_4)^{2-}$ species. Due to the clarifying amendments to independent claim 1, this 112, second paragraph, rejection of claims 2-4 is believed to be overcome.

Claims 1-3 and 8 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Reisch et al. (United States Patent Nos. 5,266,681 or 5,357,038). Further, claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Reisch et al.

Independent claims 1 and 8 require the inclusion of at least one **metal salt**. More specifically, these claims require that the metal salt be of the specific formula, $M^{(A+)}_aX^{(B-)}_b$, set forth in the claims. Both of claims 1 and 8 have been amended to more clearly distinguished the claimed invention from the disclosure of Reisch et al. Specifically, claims 1 and 8 have been amended to delete the alkoxide ion $(OC_nH_{2n+1})^-$ and clarify the invention as claimed. The remaining carbon, hydrogen, and oxygen-containing ions in the Markush grouping for X are HCO_3^- , $(C_nH_{2n-1}O_2)^-$ (i.e., a carboxylate ion), and $(C_{n+1}H_{2n-2}O_4)^{2-}$ (a dicarboxylic acid ion), none of which are basic in nature.

On the other hand, Reisch et al. merely discloses incorporation of minor, or trace, amount of **a base** into a polyol. As the Examiner correctly indicates, the bases disclosed in Reisch et al. are metal compounds. However, these metal compounds are not the same as, or do not suggest the, metal salts of the claimed invention. Reisch et al. merely discloses that the bases are an alkali metal hydroxide, an alkali metal alkoxide, an alkaline earth metal hydroxide, an alkaline earth metal alkoxide, or a combinations thereof. The most preferred bases disclosed in Reisch et al. are KOH and NaOH.

Simply stated, Reisch et al. does not disclose, teach, or otherwise suggest the inclusion of a metal salt. Importantly, in Example 4 of subject application, which is a comparative example, the Applicants distinguished the disclosure of Reisch et al. Specifically, the Applicants distinguished the incorporation of a minor amount of a base into the polyol (*see Polyol B which includes KOH added to a polyether polyol*). KOH is one of the most preferred bases disclosed in Reisch et al. Comparative Example 4, which includes the base, **and not a metal salt**, resulted in an "unusable foam". On the other hand, Example 5, which is indicative of the subject invention, incorporates a metal salt, specifically potassium phosphate, and resulted in a "homogenous, fine-celled" foam.

In view of the amendment to the claims, as well as the arguments set forth above, independent claims 1 and 8 are believed to be patentable. Also, the remaining claims, claims 2-7, depend from the novel and unobvious features of independent claim 1. Hence, any rejection of these dependent claims is believed to be overcome such that these claims are also patentable.


It is respectfully submitted that the application is now presented in condition for allowance, which allowance is respectfully solicited. Further, favorable reconsideration of the outstanding office action is hereby requested.

The Commissioner is authorized to charge our deposit account no. 08-2789 for any additional fees or credit the account for any overpayment.

Respectfully submitted,

HOWARD & HOWARD ATTORNEYS

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CERTIFICATE OF MAILING

I hereby certify that this Amendment is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to the **Assistant Commissioner for Patents, Washington, D.C. 20231**, on **January 22, 2003**.

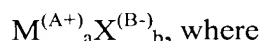

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VERSION OF CLAIMS WITH MARKINGS TO SHOW CHANGES MADE**IN THE CLAIMS:**

Please replace claims 1, 2, and 5-8 with the following

1. (Twice Amended) A process for producing polyurethanes comprising reacting at least one polyisocyanate with at least one compound containing at least two hydrogen atoms which are reactive toward isocyanate groups, wherein the compound containing at least two active hydrogen atoms comprises at least one polyether alcohol prepared by addition of alkylene oxides onto H-functional initiator substances by means of multimetal cyanide catalysis and wherein the reaction of the alkylene oxides onto the H-functional initiator substances is carried out in the presence of at least one metal salt of the formula



M is selected from [among] at least one of Li^+ , Na^+ , K^+ , Rb^+ , Cs^+ , Be^{2+} , Mg^{2+} , Ca^{2+} , Sr^{2+} , and Ba^{2+} ,

X is selected from [among] at least one of F^- , Cl^- , ClO^- , ClO_3^- , ClO_4^- , Br^- , I^- , IO_3^- , CN^- , OCN^- , NO_2^- , NO_3^- , HCO_3^- , CO_3^{2-} , S^{2-} , SH^- , HSO_3^- , SO_3^{2-} , HSO_4^- , SO_4^{2-} , $S_2O_2^{2-}$, $S_2O_3^{2-}$, $S_2O_4^{2-}$, $S_2O_5^{2-}$, $S_2O_6^{2-}$, $S_2O_7^{2-}$, $S_2O_8^{2-}$, $H_2PO_2^-$, $[H_2PO_4^{2-}]$, $H_2PO_4^{2-}$, HPO_4^{2-} , PO_4^{3-} , $P_2O_7^{4-}$, $[(OC_nH_{2n+1})^-]$, $(C_nH_{2n-1}O_2)^-$, $[(C_{n+1}H_{2n-2}O_2)^-]$, $(S_{n+1}H_{sn-2}O_4)^{2-}$ $(C_{n+1}H_{2n-2}O_4)^{2-}$ where $n = 1-20$ and their mixed salts and mixtures,

A^+ is the valence of the cation,

B^- is the valence of the anion and

a and b are integers,

with the proviso that the compound is electrically neutral.

2. (Twice Amended) A process as claimed in claim 1, wherein the metal salt $M^{(A+)}_a X^{(B-)}_b$ is selected such that:

$M^{(A+)} = Li^+, Na^+, K^+, [NH_4^+], Mg^{2+},$ or Ca^{2+} , and

$X^{(B-)} = F^-, Cl^-, Br^-, I^-, NO_3^-, HCO_3^-, CO_3^{2-}, HSO_4^-, SO_4^{2-}, H_2PO_4^-, HPO_4^{2-}, PO_4^{3-},$

$[(OC_nH_{2n+1})^-], (C_nH_{2n-1}O_2)^-,$ or $(C_{n+1}H_{2n-2}O_4)^{2-}$ where $n = 1-20$

and their mixed salts and mixtures, where

A^+ is the valence of the cation,

B^- is the valence of the anion and

a and b are integers,

with the proviso that the compound is electrically neutral.

5. (Amended) A process as claimed in [any of claims 1 to 4] claims 1 or 2, wherein the metal salt is used in an amount of from 0.1 to 50 ppm, based on the compound having at least two active hydrogen atoms.

6. (Twice Amended) A polyurethane produced according to any one of the processes as claimed in claims 1 [to 5] or 2.

7. (Twice Amended) A flexible polyurethane foam produced according to any one of the processes as claimed in claims 1 [to 6] or 2.

8. (Twice Amended) A polyether alcohol comprising the reaction product of H-functional compounds with alkylene oxides using multimetal cyanides as catalysts comprising at least one metal salt of the formula

$M^{(A+)}_a X^{(B-)}_b$, where

M is selected from [among] at least one of $Li^+, Na^+, K^+, Rb^+, Cs^+, Be^{2+}, Mg^{2+}, Ca^{2+}, Sr^{2+},$ and Ba^{2+} ,

X is selected from [among] at least one of F^- , Cl^- , ClO^- , ClO_3^- , ClO_4^- , Br^- , I^- , IO_3^- , CN^- , OCN^- , NO_2^- , NO_3^- , HCO_3^- , CO_3^{2-} , S^{2-} , SH^- , HSO_3^- , SO_3^{2-} , HSO_4^- , SO_4^{2-} , $S_2O_2^{2-}$, $S_2O_3^{2-}$, $S_2O_4^{2-}$, $S_2O_5^{2-}$, $S_2O_6^{2-}$, $S_2O_7^{2-}$, $S_2O_8^{2-}$, $H_2PO_2^-$, $[H_2PO_4^{2-}]$, $H_2PO_4^-$, HPO_4^{2-} , PO_4^{3-} , $P_2O_7^{4-}$, $[(OC_nH_{2n+1})^-]$, $(C_nH_{2n-1}O_2)^-$, $[(C_{n+1}H_{2n-2}O_2)^-]$, $(S_{n+1}H_{sn-2}O_4)^{2-}$, $(C_{n+1}H_{2n-2}O_4)^{2-}$ where $n = 1$ -20 and their mixed salts and mixtures,

A^+ is the valence of the cation,

B^- is the valence of the anion and

a and b are integers,

with the proviso that the compound is electrically neutral.